

**Math
Grade 3**

| PLD | Standard | Minimally Proficient | Partially Proficient | Proficient | Highly Proficient |
|--|-----------------|---|---|---|---|
| | | The Minimally Proficient student | The Partially Proficient student | The Proficient student | The Highly Proficient student |
| Operations and Algebraic Thinking | | | | | |
| Detailed | 3.OA.A [1 to 4] | Interprets whole number products and quotients with visual support. Multiplies and divides within 100 to solve word problems involving equal groups and arrays when a visual model is given. Determines the unknown whole number in a multiplication or division equation, when the unknown number is the product or quotient. Factors and divisors are less than or equal to 5 for all problems. | Interprets whole number products and quotients with visual support. Multiplies and divides within 100 to solve word problems involving equal groups and arrays when a visual model is given. Determines the unknown whole number in a multiplication or division equation, when the unknown number is the product or quotient. Factors and divisors are less than or equal to 9 for all problems. | Interprets products and quotients of single-digit whole numbers using equal groups of objects, arrays of objects and comparison. Multiplies and divides within 100 to solve single-step word problems involving equal groups, arrays, and measurement quantities. Determines an unknown whole number, in any position, in a multiplication and division equation. | Interprets products and quotients of whole numbers within 100, representing context using pictures, numbers, and words. Multiplies and divides within 100 to solve multi-step word problems involving equal groups, arrays, and measurement quantities. Determines an unknown whole number in a multiplication and division equation. Students will use the given context to generate an equation or create a word problem. |
| Detailed | 3.OA.B [5 to 6] | Applies the properties of operations to multiply and divide. Solves division as unknown factor problems by | Applies the properties of operations to multiply and divide. Solves division as unknown factor problems by | Applies the properties of operations as strategies to multiply and divide. Determines an appropriate strategy for | Applies multiple strategies of operations within a word problem. Solves division as unknown factor |

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| | | finding missing number in the second factor position with visual support. Factors and divisors are less than or equal to 5 for all problems. | finding missing number in any position with visual support. Factors and divisors are less than or equal to 9 for all problems. | a given situation. Understands that division can be expressed as an unknown factor problem by using the relationship between multiplication and division. | problems by using the relationship between multiplication and division, models multiplication and division in a variety of ways. |
| Detailed | 3.OA.C [7] | Multiplies and divides single-digit numbers using a variety of strategies and supports. | Fluently multiplies and divides all single-digit numbers using variety strategies. | Knows from memory all products of two single-digit numbers, fluently multiplies products within 100, fluently divides dividends that are less than 100. | Fluently multiplies and divides within 100 using a wide range of contexts. |
| Detailed | 3.OA.D [8 to 9] | Solve two-step word problems using addition and subtraction with simple context and concrete objects or visual representations. Identifies additive arithmetic patterns using visual supports, such as an addition table. | Solve two-step word problems using the four operations with simple context and visual representations (with the unknown in a variety of positions). Identifies multiplicative and subtractive arithmetic patterns using visual supports. | Solve two-step word problems using equations in the four operations (using a letter standing for the unknown quantity). Recognizes the reasonableness of answers using mental computation and estimation strategies. Identifies arithmetic patterns and explains them using properties of operations. | Creates two-step word problems using multiple operations. Creates and extends arithmetic patterns, explains patterns using properties of operations. |

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| Number and Operations in Base Ten | | | | | |
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| Detailed | 3.NBT.A [1 to 3] | Uses place value understanding to round a two-digit number to the nearest 10. Adds and subtracts two digit numbers using visual models or support. Skip counts by 10, 20 or 50 to multiply single-digit whole numbers by multiples of 10 in the range 10-90. | Uses place value understanding to round a three-digit number to the nearest 100. Adds and subtracts numbers within 1,000 using visual models or support. Uses grouping strategies (associative property) to multiply single-digit whole numbers by multiples of 10 in the range 10-90. | Uses place value understanding to round whole numbers (up to 1,000) to the nearest 10 or 100. Fluently adds and subtracts within 1,000 using any strategy. Multiplies single-digit whole numbers by multiples of 10 in the range 10-90 using any of a variety of strategies. | Uses rounding strategies in real-world situations. Explains the method used in finding the sum or difference; recognizes and identifies an error and shows the correct answer. Shows product of single-digit whole numbers by multiples of 10 using multiple strategies. |

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| Number and Operations - Fractions | | | | | |
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| Detailed | 3.NF.A [1 to 2b] | Identifies the numerator and denominator of a fraction or a fraction on a number line where the increments are equal to the denominator. | Identifies the meaning of the numerator and denominator of a fraction. Represents a fraction on a partitioned number line. | Understands $1/b$ is equal to one part when the whole is partitioned into b equal parts (where the denominators are 2, 3, 4, 6 or 8). Represents a fraction on a number line by partitioning into equal parts. | Applies understanding of unit fractions to real world situations and problems. Represents a set of fractions with unlike denominators on a number line by partitioning into equal parts. |
| Detailed | 3.NF.A [3a to 3d] | Understands, recognizes, and generates equivalent fractions using denominators of 2, 4 and 8 given visual models. Expresses and recognizes fractions that are equivalent to 1. Compares two fractions with the same denominator and records results using symbols. | Understands, recognizes, and generates equivalent fractions using denominators of 2, 4 and 8. Expresses and recognizes fractions that are equivalent to whole numbers. Compares two fractions with the same numerator and records results using symbols. | Understand, recognizes, and generates equivalent fractions using denominators of 2, 3, 4, 6, and 8; explains why the fractions are equivalent using a visual model. Expresses whole numbers as fractions. Compares two fractions that have the same numerator or same denominator using symbols and visual fraction models. | Explains why two fractions are equivalent. Identifies equivalent fractions by creating fraction models to compare fractions with different denominators that pertain to the same whole. Compares two fractions that have the same numerator or same denominator using symbols. |

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| Measurement and Data | | | | | |
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| Detailed | 3.MD.A [1 to 2] | Tells, writes, and measures time to the nearest minute. Using grams, kilograms or liters, measures and estimates liquid volumes and masses of objects using models. | Solves one-step word problems involving addition or subtraction of time intervals in minutes with scaffolding. Using grams, kilograms or liters, solves simple one-step measurement word problems using either addition or subtraction. | Solves one-step word problems involving addition and subtraction of time intervals in minutes. Using grams, kilograms or liters, estimates and solves one-step measurement word problems involving any of the four operations. | Solves two-step real world problems involving addition and subtraction of time intervals in minutes. Using grams, kilograms or liters, estimates and solves two-step measurement word problems involving any of the four operations. |
| Detailed | 3.MD.B [3 to 4] | Completes a scaled picture graph or bar graph (with a scale factor of 1 or 5) to represent data set with support. Generates measurement data by measuring lengths to the nearest half-inch. Shows the data by making a line plot, where the horizontal scale is marked by whole numbers or halves with supports. | Completes a scaled picture graph or bar graph to represent a data set with support. Solves one-step "how many more" and "how many less" problems using information presented in scaled bar graphs. Generates measurement data by measuring lengths to the nearest quarter-inch. Shows the data by making a line plot, where the horizontal scale is marked by whole numbers, halves, or quarters with supports. | Creates a scaled picture graph or bar graph to represent a data set. Solves two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. Shows the data by making a line plot, where the horizontal scale is marked by whole numbers, halves or quarters. | Solves multi-step "how many more" and "how many less" problems using information presented in scaled bar graphs. Uses a line plot to answer questions or solve problems. |

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| Detailed | 3.MD.C [5a to 7d] | Understands what a square unit is and that a plane figure can be covered without gaps or overlaps to find an area. Finds the area of one or two rectangles by tiling. | Understands area is measured using square units, finds area of a rectangle by counting the square units. Shows that the area of a rectangle find by tiling is the same as would be found by multiplying the side lengths. Finds the area of two rectangles by tiling and adds the areas of the rectangles. | Understands area is measured using square units, finds area of a plane figure by counting the square units or multiplying the side lengths, in the context of solving real-world and mathematical problems. Represents whole number products as rectangular areas. | Finds the area of 2 plane figures by counting the square units or multiplying their side lengths and compares their sizes. Creates a word problem using the distributive property to find the area of rectangles. |
| Detailed | 3.MD.D [8] | Finds the perimeter and area of polygons (given the side lengths). | Solves mathematical problems involving perimeters of polygons, including finding the perimeter and area (given the side lengths); compares and contrasts area and perimeter. | Solves real-word and mathematical problems involving perimeters of polygons, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. | Constructs rectangles that have the same perimeter but different areas and the reverse. |

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| Geometry | | | | | |
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| Detailed | 3.G.A [1 to 2] | <p>Identifies examples of quadrilaterals; recognizes that examples of quadrilaterals have shared attributes, and that the shared attributes can define a larger category. Partitions shapes into parts with equal areas and expresses the area as a unit fraction of the whole (limited to halves and quarters).</p> | <p>Understands the properties of quadrilaterals and the subcategories of quadrilaterals. Partitions shapes into parts with equal areas and expresses the area as a unit fraction of the whole (limited to halves, quarters, and eighths).</p> | <p>Recognizes and sorts examples of quadrilaterals that have shared attributes and that the shared attributes can define a larger category; draws examples of quadrilaterals that don't belong to the categories of rhombuses, rectangles, and squares. Partitions shapes into parts with equal areas and expresses the area as a unit fraction (with denominator of 2, 3, 4, 6, or 8) of the whole.</p> | <p>Recognizes and sorts examples of quadrilaterals that have shared attributes and that the shared attributes can define a larger category; draws examples and non-examples of quadrilaterals that are not rhombuses, rectangles, or squares. Partitions shapes in multiple ways into parts with equal areas and expresses the area as a unit fraction of the whole.</p> |